SECTION 9-02, BITUMINOUS MATERIALS
May 21, 2003

9-02.1(4) Asphalt Cements
The reference to "AASHTO MP1" is revised to read "AASHTO M320".

9-02.1(4)A Vacant
This section including title is revised to read:

9-02.1(4)A Performance Grade (PG) Asphalt Cement

PERFORMANCE GRADE	PG 58			PG 64			PG 70			PG 76	
	22	28	34	22	28	34	22	28	34	22	28
ORIGINAL BINDER											
Flash Point Temp., T48 MIN C°	230										
Rotational Viscosity T316 Maximum 3 Pa·s, Test Temp C°	135										
Dynamic Shear, T315: G*/sinδ Min., 1.00 kPa Test Temp @ 10 rad/s, C°	58			64			70			76	
ROLLING THIN FILM OVEN RESIDUE (T240)											
Mass Loss, Maximum, percent	1.00										
Dynamic Shear, T315: G*/sinδ Min., 2.20 kPa Test Temp @ 10 rad/s, C°	58			64			70			76	
PRESSURE AGING VESSEL RESIDUE (R28)											
PAV Aging Temperature C°	100										
Dynamic Shear, T315: G*sinδ Maximum, 5000 kPa Test Temp @ 10 rad/s, C°	22	19	16	25	22	19	28	25	22	31	28
Creep Stiffness, T313 S, Maximum, 300 Mpa m-value, Minimum, 0.300 Test Temp @ 60s, C°	-12	-18	-24	-12	-18	-24	-12	-18	-24	-12	-18

All Performance Graded Binders not included in this chart shall be determined by Table 1 "Performance Graded Asphalt Specification Chart in AASHTO M320.

9-02.1(8) Hot Melt Traffic Button Adhesive
This section including title is revised to read:

9-02.1(8) Flexible Bituminous Pavement Marker Adhesive
Flexible bituminous pavement marker adhesive is a hot melt thermoplastic bituminous material used for bonding raised pavement markers and recessed pavement markers to the pavement.

The adhesive material shall conform to the following requirements:

Property	Test Method	Requirement
Penetration, 77 F, 100g, 5 sec, dmm	AASHTO T 49	30 Max.
Softening Point, F	AASHTO T 53	200 Min.
Rotational Thermosel Viscosity, cP, #27 spindle, 20 RPM, 400 F	AASHTO T 316	5000 Max.
Ductility, 77 F, 5 cm/minute, cm	AASHTO T 51	15 Min.
Ductility, 39.2 F, 1 cm/minute, cm	AASHTO T 51	5 Min.
Flexibility, 1”, 20 F, 90 deg. Bend, 10 sec., 1/8” x 1” x 6” specimen	ASTM D 3111 Note 1	Pass

Flexible bituminous adhesive shall develop bond pull-off strength greater than 50 psi when tested in accordance with WSDOT T- 426.

Note 1: Flexibility test is modified by bending specimen through an arc of 90 degrees at a uniform rate in 10 seconds over a 1-inch diameter mandrel.